

ABSTRACT OF THE DISCLOSURE

A near-hermetic microwave semiconductor device, suitable for wideband high frequency applications including Phased Array Antenna systems, includes a PWB as a substrate; a GaAs Monolithic Microwave Integrated Circuit (MMIC) disposed on the substrate; a silicon carbide sealant disposed on the MMIC; and a Backside
5 Interconnect with solder attachment which connects the substrate to the silicon carbide-coated MMIC. A conformal coating is disposed on the sealant, and a cover is disposed on the conformally-coated MMIC.